REMARKS/ARGUMENTS

The Office Action mailed September 20, 2006 has been carefully considered. Reconsideration in view of the following remarks is respectfully requested. Applicants respectfully request that the Amendment and Response to Final Office Action be admitted under 37 C.F.R. 1.116. Applicants submit that this amendment presents claims in better form for consideration on appeal. Furthermore, applicants believe that consideration of this amendment could lead to favorable action that would remove one or more issues for appeal. Applicants submit that thus there is good and sufficient reason why this amendment should be admitted now.

Claims 1 – 34 are pending in the application. Claims 1, 2, 6, 8, 9, 11 - 14, and 16 – 20 have been amended. Claims 7, 10, 15, and 32 – 34 have been canceled. New claims 35 – 37 have been added. Support for the amendments is found in the specification, drawings, and claims as originally filed. Applicants submit, therefore, that the amendments do not add new matter.

Claim Rejections Under USC 101

The Examiner has objected to claims 1, 9, and 14 – 17, 24, and 31. In response applicants have amended the claims.

35 U.S.C. § 103 Rejection

Claims 1-6, 9, 14, 17-25 and 32-34 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Anandakumar et al.[1]

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[1] U.S. Patent No. 6,765,904

In response to the rejection of claims 1 – 6, 9, 14, 17 – 19 and 32 – 34, applicants have

amended or canceled the claims to address the Examiner's rejection.

In regard to the rejection of claims 20 – 25, applicants respectfully submit that

Anandakumar does not render amended claim 20 unpatentable. Applicants have amended calim

20 to more distinctly claim the invention and address the Examiner's rejection. Amended claim

20 includes the following limitations.

A process comprising:
        1) automatically determining the <u>dominant</u> type of noise on a logical channel
and selecting a group of burst profiles suited to the dominant type of noise on said logical
channel;
        2) selecting an initial burst profile for said logical channel;
        3) determining a quality of channel parameter for said logical channel;
        4) comparing said quality of channel parameter to one or more thresholds;
        5) determining based upon said comparison(s) made in step 4 whether a
change in bit rate on said logical channel is recommended.

(Amended claim 20) (Emphasis added)

Applicants respectfully submit that Anandakumar does not disclose or suggest the

limitation of automatically determining the dominant type of noise on a logical channel and

selecting a group of burst profiles suited to the type of prevalent noise on said channel.

Applicants maintain that regardless of whether Anandakumar makes obvious that packet loss

may be due to noise, Anandakumar does not disclose determining the dominant type of noise nor

taking specific action based upon that determination.

The Examiner has raised some specific issues in regard to the limitation of "prevalent" in the former claim 20. Applicants thank the Examiner for the excerpt from the dictionary defining prevalent as "widely existing". In response to the Examiner's comment, applicants respectfully submit that prevalent also has the well-recognized meaning of "dominant" (please see attached excerpt from Merriam-Webster Online Dictionary).

While the term "widely existing" may not indicate a specific type of noise, the term dominant does so. Dominant means superior in strength, influence, or effect. Dominant is therefore a superlative and indicates a specific type of noise (i.e., the noise superior in strength or effect).

Applicants respectfully submit that a thorough reading of the specification makes clear that the term "prevalent" is used in the sense of "dominant" and not in the sense of "widely existing." The specification discloses the following.

The burst profiles are selected automatically in some embodiments, and manually in others, but in each case, the burst profile should be selected according to the type of channel noise which is <u>prevalent</u>. The generic process to do this is described next.

FIG. 5 represents a flowchart for a generic process to determine the channel type, monitor noise conditions and automatically change the bit rate. In automatic mode, the process of burst profile selection starts first with a determination of whether the channel is AWGN or impulse noise, as <u>symbolized by step 84</u>. ..

(Specification, page 16, lines 12 – 18)

In the preferred embodiment, <u>the determination as to whether a logical channel is dominated by impulse noise</u> is determined by the following monitoring algorithm to switch over to a characterization of a channel as an impulse noise dominated channel if the logical channel is currently deemed an AWGN channel:

if TDMA_erasure_percentage>TDMA_erasure_percentage_required*(1+T- T1) then
TDMA channel type=Impulse Noise
End
TT1 is a threshold used to establish the upper limit of TDMA_erasure_percentage which is tolerated before a logical channel is declared to be an impulse noise dominated channel.

In the preferred embodiment, the determination as to whether a logical channel is dominated by AWGN is determined by the following monitoring algorithm to switch over to a characterization of a channel as an AWGN dominated channel if the logical channel is currently deemed an impulse noise channel:

if TDMA_erasure_percentage<TDMA_erasure_percentage_required*(1-T- T2) then TDMA channel type=AWGN
End

TT2 is a threshold used to establish the lower limit of TDMA_erasure_percentage which is tolerated before a logical channel is declared to be an AWGN dominated channel. TT1 and TT2 are separated by enough distance to provide a hysteresis effect to prevent excessive switching between channel characterization. Default values for TT1 and TT2 are TT1=0.3 and TT2=0.3. TDMA_erasure_percentage_required is a programmable constant in the preferred embodiment, but a fixed constant in other embodiments. A typical default value is 5.

For SCDMA channels, the determination of dominant noise type on a logical channel is determined in a similar fashion using the following monitoring equations and algorithm. If the SCDMA channel is deemed AWGN, monitoring to recharacterize the channel as impulse noise dominated is done by evaluating the expression and the following algorithm ...
(Specification, page 17, line 27 – page 18, line 13)

Once the dominant noise characteristic of the channel is determined, the set of burst profiles for AWGN or impulse noise channels is selected, as appropriate, as symbolized by step 84.

(Specification, page 18, lines 26 - 28)

FIG. 6 is a flow diagram for a process like that shown in FIG. 5 but for manual changes in bit rate. The process of FIG. 6 automatically determines the dominant noise type on the channel and picks the appropriate set of burst profiles for the dominant noise type, and automatically monitors noise conditions, and when a data rate change is indicated, generates a message indicating to an operator that a data rate change is advisable. The difference between the process of FIG. 5 and FIG. 6 is embodied in step 100 where instead of automatically picking a new burst profile and generating a UCD message, a message is generated to the cable operator suggesting a bit rate change.

(Specification, page 19, line 29 – page 20, line 3)

In light of the amendment to claim 20 and the clear support for such amendment in the

specification, Applicants respectfully submit that claim 20 is not rendered obvious by

Anandakumar.

Given that claims 21 – 25 depend from claim 20, applicants respectfully submit that claims 21 – 25 are, likewise, not rendered obvious by Anandakumar.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Conclusion

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Please charge any additional required fee or credit any overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,

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Dated: 11/14/06

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